

# SEQUENCE LISTING

<110> Hastings, et al

<120> Human CCN-like Growth Factor

<130> PF185D1C2

<150> US 09/853,625

<151> 2001-05-14

<150> US 09/053,587

<151> 1998-04-01

<150> US 08/468,847

<151> 1995-06-06

<160> 19

<170> PatentIn version 3.2

<210> 1

<211> 900

<212> DNA

<213> Homo sapiens

<400> 1

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cttctctctg ccattcattt ctatctcctt ccccttgcag gcatcctaata gaaaagctgt      180
ttggcttttta aaaatgatgc cacagaaatc ctttattcac atgtgggttaa acctgttcca      240
gcacacccca gcagcaacag cacgttgaat caagccagaa atggaggcag gcatttcagt      300
aacactggac tggatcggaa cactcgggtt caagtgggtt gccgggaact gcgttccacc      360
aaatacatct ctgatggcca gtgcaccagc atcagccctc tgaaggagct ggtgtgtgct      420
ggcgagtgtc tgccccctgcc agtgctccct aactggattg gaggaggcta tggaacaaag      480
tactggagca ggaggagctc ccaggagtgg cgggtgtgtca atgacaaaac ccgtaccag      540
agaatccagc tgcagtgcc aagatggcagc acacgcacct acaaaatcac agtagtcact      600
gcctgcaagt gcaagaggta caccggcag cacaacgagt ccagtcacaa ctttgagagc      660
atgtcacctg ccaagccagt ccagcatcac agagagcgga aaagagccag caaatccagc      720
aagcacagca tgagttagaa ctcagactcc cataactaga cttactagta accatctgct      780
ttacagattt gattgcttgg aagactcaag cctgccactg ctgttttctc acttgaaagt      840
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<210> 2

<211> 206

<212> PRT  
<213> Homo sapiens

<400> 2

Met Leu Pro Pro Ala Ile His Phe Tyr Leu Leu Pro Leu Ala Cys Ile  
1 5 10 15

Leu Met Lys Ser Cys Leu Ala Phe Lys Asn Asp Ala Thr Glu Ile Leu  
20 25 30

Tyr Ser His Val Val Lys Pro Val Pro Ala His Pro Ser Ser Asn Ser  
35 40 45

Thr Leu Asn Gln Ala Arg Asn Gly Gly Arg His Phe Ser Asn Thr Gly  
50 55 60

Leu Asp Arg Asn Thr Arg Val Gln Val Gly Cys Arg Glu Leu Arg Ser  
65 70 75 80

Thr Lys Tyr Ile Ser Asp Gly Gln Cys Thr Ser Ile Ser Pro Leu Lys  
85 90 95

Glu Leu Val Cys Ala Gly Glu Cys Leu Pro Leu Pro Val Leu Pro Asn  
100 105 110

Trp Ile Gly Gly Gly Tyr Gly Thr Lys Tyr Trp Ser Arg Arg Ser Ser  
115 120 125

Gln Glu Trp Arg Cys Val Asn Asp Lys Thr Arg Thr Gln Arg Ile Gln  
130 135 140

Leu Gln Cys Gln Asp Gly Ser Thr Arg Thr Tyr Lys Ile Thr Val Val  
145 150 155 160

Thr Ala Cys Lys Cys Lys Arg Tyr Thr Arg Gln His Asn Glu Ser Ser  
165 170 175

His Asn Phe Glu Ser Met Ser Pro Ala Lys Pro Val Gln His His Arg  
180 185 190

Glu Arg Lys Arg Ala Ser Lys Ser Ser Lys His Ser Met Ser  
195 200 205

<210> 3  
<211> 33  
<212> DNA

<213> Artificial sequence

<220>

<223> Primer

<400> 3

cactgcaagc ttattaaaaa tgatgccaca gaa 33

<210> 4

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> Primer

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catgcctcta gatatgggag tctgagttct aac 33

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<213> Artificial sequence

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<223> Primer

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cattcgcgga tccbccatca tgcttcctcc tgccattcat 40

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<211> 34

<212> DNA

<213> Artificial sequence

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cactgcctct agatatggga gtctgagttc taac 34

<210> 7

<211> 39

<212> DNA

<213> Artificial sequence

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catcgcggat ccgcatcat gcttcctcct gccattcat 39

<210> 8

<211> 30

<212> DNA

<213> Artificial sequence

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<223> Primer

<400> 8

tgcggatcct atgggagtct gagttctaac 30

<210> 9

<211> 17

<212> DNA

<213> Artificial sequence

<220>

<223> Primer

<400> 9

gtaaaacgac ggccagt 17

<210> 10

<211> 19

<212> DNA

<213> Artificial sequence

<220>

<223> Primer

<400> 10

ggaaacagct atgaccatg 19

<210> 11

<211> 379

<212> PRT

<213> Mus musculus

<400> 11

Met Ser Ser Ser Thr Phe Arg Thr Leu Ala Val Ala Val Thr Leu Leu  
1 5 10 15

His Leu Thr Arg Leu Ala Leu Ser Thr Cys Pro Ala Ala Cys His Cys  
20 25 30

Pro Leu Glu Ala Pro Lys Cys Ala Pro Gly Val Gly Leu Val Arg Asp  
35 40 45

Gly Cys Gly Cys Cys Lys Val Cys Ala Lys Gln Leu Asn Glu Asp Cys  
50 55 60

Ser Lys Thr Gln Pro Cys Asp His Thr Lys Gly Leu Glu Cys Asn Phe  
65 70 75 80

Gly Ala Ser Ser Thr Ala Leu Lys Gly Ile Cys Arg Ala Gln Ser Glu  
 85 90 95

Gly Arg Pro Cys Glu Tyr Asn Ser Arg Ile Tyr Gln Asn Gly Glu Ser  
 100 105 110

Phe Gln Pro Asn Cys Lys His Gln Cys Thr Cys Ile Asp Gly Ala Val  
 115 120 125

Gly Cys Ile Pro Leu Cys Pro Gln Glu Leu Ser Leu Pro Asn Leu Gly  
 130 135 140

Cys Pro Asn Pro Arg Leu Val Lys Val Ser Gly Gln Cys Cys Glu Glu  
 145 150 155 160

Trp Val Cys Asp Glu Asp Ser Ile Lys Asp Ser Leu Asp Asp Gln Asp  
 165 170 175

Asp Leu Leu Gly Leu Asp Ala Ser Glu Val Glu Leu Thr Arg Asn Asn  
 180 185 190

Glu Leu Ile Ala Ile Gly Lys Gly Ser Ser Leu Lys Arg Leu Pro Val  
 195 200 205

Phe Gly Thr Glu Pro Arg Val Leu Phe Asn Pro Leu His Ala His Gly  
 210 215 220

Gln Lys Cys Ile Val Gln Thr Thr Ser Trp Ser Gln Cys Ser Lys Ser  
 225 230 235 240

Cys Gly Thr Gly Ile Ser Thr Arg Val Thr Asn Asp Asn Pro Glu Cys  
 245 250 255

Arg Leu Val Lys Glu Thr Arg Ile Cys Glu Val Arg Pro Cys Gly Gln  
 260 265 270

Pro Val Tyr Ser Ser Leu Lys Lys Gly Lys Lys Cys Ser Lys Thr Lys  
 275 280 285

Lys Ser Pro Glu Pro Val Arg Phe Thr Tyr Ala Gly Cys Ser Ser Val  
 290 295 300

Lys Lys Tyr Arg Pro Lys Tyr Cys Gly Ser Cys Val Asp Gly Arg Cys  
 305 310 315 320

Cys Thr Pro Leu Gln Thr Arg Thr Val Lys Met Arg Phe Arg Cys Glu  
 325 330 335

Asp Gly Glu Met Phe Ser Lys Asn Val Met Met Ile Gln Ser Cys Lys  
 340 345 350

Cys Asn Tyr Asn Cys Pro His Pro Asn Glu Ala Ser Phe Arg Leu Tyr  
 355 360 365

Ser Leu Phe Asn Asp Ile His Lys Phe Arg Asp  
 370 375

<210> 12  
 <211> 373  
 <212> PRT  
 <213> Homo sapiens

<400> 12

Met Ser Ser Arg Ile Val Arg Glu Leu Ala Leu Val Val Thr Leu Leu  
 1 5 10 15

His Leu Thr Arg Val Gly Leu Ser Thr Cys Pro Ala Asp Cys His Cys  
 20 25 30

Pro Gly Leu Glu Cys Asn Phe Gly Ala Ser Ser Thr Ala Leu Lys Gly  
 35 40 45

Ile Cys Arg Ala Gln Ser Glu Gly Arg Pro Cys Glu Tyr Asn Ser Arg  
 50 55 60

Ile Tyr Gln Asn Gly Glu Ser Phe Gln Pro Asn Cys Lys His Gln Cys  
 65 70 75 80

Thr Cys Ile Leu Glu Ala Pro Lys Cys Ala Pro Gly Val Gly Leu Arg  
 85 90 95

Asp Gly Cys Gly Cys Cys Lys Val Cys Ala Lys Gln Leu Asn Glu Asp  
 100 105 110

Cys Arg Lys Thr Gln Pro Cys Asp His Thr Lys Gly Trp Arg Arg Gly  
 115 120 125

Ala Cys Ile Pro Leu Cys Pro Gln Glu Leu Ser Leu Pro Asn Leu Gly  
 130 135 140

Cys Pro Asn Pro Arg Leu Val Lys Val Thr Gly Gln Cys Cys Glu Glu

145		150		155		160
Trp Val Cys Asp	Glu Asp Ser Ile Lys Asp	Pro Met Glu Asp	Gln Asp			
	165		170			175
Gly Leu Leu Gly	Lys Gly Leu Gly Phe Asp	Ala Ser Glu Val	Glu Leu			
	180		185			190
Thr Arg Asn Asn	Glu Leu Ile Ala Val Gly Lys	Gly Ser Ser Leu Lys				
	195		200			205
Arg Leu Pro Val	Phe Gly Met Glu Pro Arg	Ile Leu Tyr Asn	Pro Leu			
	210		215			220
Gln Gly Gln Lys	Cys Thr Lys Lys Ser Pro	Glu Pro Val Arg	Phe Thr			
	225		230			235
Tyr Ala Gly Cys	Leu Ser Val Lys Lys Tyr Arg	Pro Lys Tyr Cys	Gly			
	245		250			255
Ser Cys Val Asp	Gly Arg Cys Cys Thr Pro	Gln Leu Thr Arg	Thr Val			
	260		265			270
Lys Met Arg Phe	Pro Cys Glu Ile Val Gln Thr	Thr Ser Trp Ser	Gln			
	275		280			285
Cys Ser Lys Thr	Cys Gly Thr Gly Ile Ser Thr	Arg Val Thr Asn	Asp			
	290		295			300
Asn Pro Glu Cys	Arg Leu Val Lys Glu Thr Arg	Ile Cys Glu Val	Arg			
	305		310			315
Pro Cys Gly Gln	Pro Val Tyr Ser Ser Leu Lys	Lys Gly Lys Lys	Cys			
	325		330			335
Ser Lys Asp Gly	Glu Thr Phe Ser Lys Asn Val	Met Met Ile Gln	Ser			
	340		345			350
Ser Lys Cys Asn	Tyr Asn Cys Pro His Ala Asn	Glu Ala Ala Phe	Pro			
	355		360			365
Phe Tyr Arg Leu	Phe					
	370					

<210> 13

<211> 375  
 <212> PRT  
 <213> Gallus gallus

<400> 13

Met Gly Ser Ala Gly Ala Arg Pro Ala Leu Ala Ala Ala Leu Leu Cys  
 1 5 10 15

Leu Ala Arg Leu Ala Leu Gly Ser Pro Cys Pro Ala Val Cys Gln Cys  
 20 25 30

Pro Ala Ala Ala Pro Gln Cys Ala Pro Gly Val Gly Leu Val Pro Asp  
 35 40 45

Gly Cys Gly Cys Cys Lys Val Cys Ala Lys Gln Leu Asn Glu Asp Cys  
 50 55 60

Ser Arg Thr Gln Pro Cys Asp His Thr Lys Gly Leu Glu Cys Asn Phe  
 65 70 75 80

Gly Ala Ser Pro Ala Ala Thr Asn Gly Ile Cys Arg Ala Gln Ser Glu  
 85 90 95

Gly Arg Pro Cys Glu Tyr Asn Ser Lys Ile Tyr Gln Asn Gly Glu Ser  
 100 105 110

Phe Gln Pro Asn Cys Lys His Gln Cys Thr Cys Ile Asp Gly Ala Val  
 115 120 125

Gly Cys Ile Pro Leu Cys Pro Gln Glu Leu Ser Leu Pro Asn Leu Gly  
 130 135 140

Cys Pro Ser Pro Arg Leu Val Lys Val Pro Gly Gln Cys Cys Glu Glu  
 145 150 155 160

Trp Val Cys Asp Glu Ser Lys Asp Ala Leu Glu Glu Leu Glu Gly Phe  
 165 170 175

Phe Ser Lys Glu Phe Gly Leu Asp Ala Ser Glu Gly Glu Leu Thr Arg  
 180 185 190

Asn Asn Glu Leu Ile Ala Ile Val Lys Gly Gly Leu Lys Met Leu Pro  
 195 200 205

Val Phe Gly Ser Glu Pro Gln Ser Arg Ala Phe Glu Asn Pro Lys Cys  
 210 215 220



Ile Val Gln Thr Thr Ser Trp Ser Gln Cys Ser Lys Thr Cys Gly Thr  
 225 230 235 240

Gly Ile Ser Thr Arg Val Thr Asn Asp Asn Pro Asp Cys Lys Leu Ile  
 245 250 255

Lys Glu Thr Arg Ile Cys Glu Val Arg Pro Cys Gly Gln Pro Ser Tyr  
 260 265 270

Ala Ser Leu Lys Lys Gly Lys Lys Cys Thr Lys Thr Lys Lys Ser Pro  
 275 280 285

Ser Pro Val Arg Phe Thr Tyr Ala Gly Cys Ser Ser Val Lys Lys Tyr  
 290 295 300

Arg Pro Lys Tyr Cys Gly Ser Cys Val Asp Gly Arg Cys Cys Thr Pro  
 305 310 315 320

Gln Gln Thr Arg Thr Val Lys Ile Arg Phe Arg Cys Asp Asp Gly Glu  
 325 330 335

Thr Phe Thr Lys Ser Val Met Met Ile Gln Ser Cys Arg Cys Asn Tyr  
 340 345 350

Asn Cys Pro His Ala Asn Glu Ala Tyr Pro Phe Tyr Arg Leu Val Asn  
 355 360 365

Asp Ile His Lys Phe Arg Asp  
 370 375

<210> 14  
 <211> 349  
 <212> PRT  
 <213> Homo sapiens

<400> 14

Met Thr Ala Ala Ser Met Gly Pro Val Arg Val Ala Phe Val Val Leu  
 1 5 10 15

Leu Ala Leu Cys Ser Arg Pro Ala Val Gly Gln Asn Cys Ser Gly Pro  
 20 25 30

Cys Arg Cys Pro Asp Glu Pro Ala Pro Arg Cys Pro Ala Gly Val Ser  
 35 40 45

Leu Val Leu Asp Gly Cys Gly Cys Cys Arg Val Cys Ala Lys Gln Leu  
 50 55 60

Gly Glu Leu Cys Thr Glu Arg Asp Pro Cys Asp Pro His Lys Gly Leu  
 65 70 75 80

Phe Cys Asp Phe Gly Ser Pro Ala Asn Arg Lys Ile Gly Val Cys Thr  
 85 90 95

Ala Lys Asp Gly Ala Pro Cys Ile Phe Gly Gly Thr Val Tyr Arg Ser  
 100 105 110

Gly Glu Ser Phe Gln Ser Ser Cys Lys Tyr Gln Cys Thr Cys Leu Asp  
 115 120 125

Gly Ala Val Gly Cys Met Pro Leu Cys Ser Met Asp Val Arg Leu Pro  
 130 135 140

Ser Pro Asp Cys Pro Phe Pro Arg Arg Val Lys Leu Pro Gly Lys Cys  
 145 150 155 160

Cys Glu Glu Trp Val Cys Asp Glu Pro Lys Asp Gln Thr Val Val Gly  
 165 170 175

Pro Ala Leu Ala Ala Tyr Arg Leu Glu Asp Thr Phe Gly Pro Asp Pro  
 180 185 190

Thr Met Ile Arg Ala Asn Cys Leu Val Gln Thr Thr Glu Trp Ser Ala  
 195 200 205

Cys Ser Lys Thr Cys Gly Met Gly Ile Ser Thr Arg Val Thr Asn Asp  
 210 215 220

Asn Ala Ser Cys Arg Leu Glu Lys Gln Ser Arg Leu Cys Met Val Arg  
 225 230 235 240

Pro Cys Glu Ala Asp Leu Glu Glu Asn Ile Lys Lys Gly Lys Lys Cys  
 245 250 255

Ile Arg Thr Pro Lys Ile Ser Lys Pro Ile Lys Phe Glu Leu Ser Gly  
 260 265 270

Cys Thr Ser Met Lys Thr Tyr Arg Ala Lys Phe Cys Gly Val Cys Thr  
 275 280 285

Asp Gly Arg Cys Cys Thr Pro His Arg Thr Thr Thr Leu Pro Val Glu  
 290 295 300

Phe Lys Cys Pro Asp Gly Glu Val Met Lys Lys Asn Met Met Phe Ile  
 305 310 315 320

Lys Thr Cys Ala Cys His Tyr Asn Cys Pro Gly Asp Asn Asp Ile Phe  
 325 330 335

Glu Ser Leu Tyr Tyr Arg Lys Met Tyr Gly Asp Met Ala  
 340 345

<210> 15  
 <211> 348  
 <212> PRT  
 <213> Mus musculus

<400> 15

Met Leu Ala Ser Val Ala Gly Pro Ile Ser Leu Ala Leu Val Leu Leu  
 1 5 10 15

Ala Leu Cys Thr Arg Pro Ala Thr Gly Gln Asp Cys Ser Ala Gln Cys  
 20 25 30

Gln Cys Ala Ala Glu Ala Ala Pro His Cys Pro Ala Gly Val Ser Leu  
 35 40 45

Val Leu Asp Gly Cys Gly Cys Cys Arg Val Cys Ala Lys Gln Leu Gly  
 50 55 60

Glu Leu Cys Thr Glu Arg Asp Pro Cys Asp Pro His Lys Gly Leu Phe  
 65 70 75 80

Cys Asp Phe Gly Ser Pro Ala Asn Arg Lys Ile Gly Val Cys Thr Ala  
 85 90 95

Lys Asp Gly Ala Pro Cys Val Phe Gly Gly Ser Val Tyr Arg Ser Gly  
 100 105 110

Glu Ser Phe Gln Ser Ser Cys Lys Tyr Gln Cys Thr Cys Leu Asp Gly  
 115 120 125

Ala Val Gly Cys Val Pro Leu Cys Ser Met Asp Val Arg Leu Pro Ser  
 130 135 140

Pro Asp Cys Pro Phe Pro Arg Arg Val Lys Leu Pro Gly Lys Cys Cys  
 145 150 155 160

Glu Glu Trp Val Cys Asp Glu Pro Lys Asp Arg Thr Ala Val Gly Pro  
 165 170 175

Ala Leu Ala Ala Tyr Arg Leu Glu Asp Thr Phe Gly Pro Asp Pro Thr  
 180 185 190

Met Met Arg Ala Asn Cys Leu Val Gln Thr Thr Glu Trp Ser Ala Cys  
 195 200 205

Ser Lys Thr Cys Gly Met Gly Ile Ser Thr Arg Val Thr Asn Asp Asn  
 210 215 220

Thr Phe Cys Arg Leu Glu Lys Gln Ser Arg Leu Cys Met Val Arg Pro  
 225 230 235 240

Cys Glu Ala Asp Leu Glu Glu Asn Ile Lys Lys Gly Lys Lys Cys Ile  
 245 250 255

Arg Thr Pro Lys Ile Ala Lys Pro Val Lys Phe Glu Leu Ser Gly Cys  
 260 265 270

Thr Ser Val Lys Thr Tyr Arg Ala Lys Phe Cys Gly Val Cys Thr Asp  
 275 280 285

Gly Arg Cys Cys Thr Pro His Arg Thr Thr Thr Leu Pro Val Glu Phe  
 290 295 300

Lys Cys Pro Asp Gly Glu Ile Met Lys Lys Asn Met Met Phe Ile Lys  
 305 310 315 320

Thr Cys Ala Cys His Tyr Asn Cys Pro Gly Asp Asn Asp Ile Phe Glu  
 325 330 335

Ser Leu Tyr Tyr Arg Lys Met Tyr Gly Asp Met Ala  
 340 345

<210> 16  
 <211> 351  
 <212> PRT  
 <213> Gallus gallus

<400> 16

Met Glu Thr Gly Gly Gly Gln Gly Leu Pro Val Leu Leu Leu Leu

1	5	10	15
Leu Leu Leu Arg Pro Cys Glu Val Ser Gly Arg Glu Ala Ala Cys Pro	20	25	30
Arg Pro Cys Gly Gly Arg Cys Pro Ala Glu Pro Pro Arg Cys Ala Pro	35	40	45
Gly Val Pro Ala Val Leu Asp Gly Cys Gly Cys Cys Leu Val Cys Ala	50	55	60
Arg Gln Arg Gly Glu Ser Cys Ser Pro Leu Leu Pro Cys Asp Glu Ser	65	70	75
Gly Gly Leu Tyr Cys Asp Arg Gly Pro Glu Asp Gly Gly Gly Ala Gly	85	90	95
Ile Cys Met Val Leu Glu Gly Asp Asn Cys Val Phe Asp Gly Met Ile	100	105	110
Tyr Arg Asn Gly Glu Thr Phe Gln Pro Ser Cys Lys Tyr Gln Cys Thr	115	120	125
Cys Arg Asp Gly Gln Ile Gly Cys Leu Pro Arg Cys Asn Leu Gly Leu	130	135	140
Leu Leu Pro Gly Pro Asp Cys Pro Phe Pro Arg Lys Ile Glu Val Pro	145	150	155
Gly Glu Cys Cys Glu Lys Trp Val Cys Asp Pro Arg Asp Glu Val Leu	165	170	175
Leu Gly Gly Phe Ala Met Ala Ala Tyr Arg Gln Glu Ala Thr Leu Gly	180	185	190
Ile Asp Val Ser Asp Ser Ser Ala Asn Cys Ile Glu Gln Thr Thr Glu	195	200	205
Trp Ser Ala Cys Ser Lys Ser Cys Gly Met Gly Phe Ser Thr Arg Val	210	215	220
Thr Asn Arg Asn Gln Gln Cys Glu Met Val Lys Gln Thr Arg Leu Cys	225	230	235
Met Met Arg Pro Cys Glu Asn Glu Glu Pro Ser Asp Lys Lys Gly Lys			

	245		250		255
Lys Cys Ile Gln Thr Lys Lys Ser Met Lys Ala Val Arg Phe Glu Tyr	260	265	270		
Lys Asn Cys Thr Ser Val Gln Thr Tyr Lys Pro Arg Tyr Cys Gly Leu	275	280	285		
Cys Asn Asp Gly Arg Cys Cys Thr Pro His Asn Thr Lys Thr Ile Gln	290	295	300		
Val Glu Phe Arg Cys Pro Gln Gly Lys Phe Leu Lys Lys Pro Met Met	305	310	315	320	
Leu Ile Asn Thr Cys Val Cys His Gly Asn Cys Pro Gln Ser Asn Asn	325	330	335		
Ala Phe Phe Gln Pro Leu Asp Pro Met Ser Ser Glu Ala Lys Ile	340	345	350		
<210> 17					
<211> 357					
<212> PRT					
<213> Homo sapiens					
<400> 17					
Met Gln Ser Val Gln Ser Thr Ser Phe Cys Leu Arg Lys Gln Cys Leu	1	5	10	15	
Cys Leu Thr Phe Leu Leu Leu His Leu Leu Gly Gln Val Ala Ala Thr	20	25	30		
Gln Arg Cys Pro Pro Gln Cys Pro Gly Arg Gly Leu Tyr Cys Asp Arg	35	40	45		
Ser Ala Asp Pro Ser Asn Gln Thr Gly Ile Cys Thr Ala Val Glu Gly	50	55	60		
Asp Asn Cys Val Phe Asp Gly Cys Ile Tyr Arg Ser Gly Glu Lys Phe	65	70	75	80	
Gln Pro Ser Cys Lys Phe Gln Cys Thr Cys Arg Cys Pro Ala Thr Pro	85	90	95		
Pro Thr Cys Ala Pro Gly Val Arg Ala Val Leu Asp Gly Cys Ser Cys	100	105	110		

Cys Leu Val Cys Ala Arg Gln Arg Gly Glu Ser Cys Ser Asp Leu Glu  
115 120 125

Pro Cys Asp Glu Ser Ser Asp Gly Gln Ile Gly Cys Val Pro Arg Cys  
130 135 140

Gln Leu Asp Val Leu Leu Pro Glu Pro Asn Cys Pro Ala Pro Arg Lys  
145 150 155 160

Val Glu Val Pro Gly Glu Cys Cys Glu Lys Trp Ile Cys Gly Pro Asp  
165 170 175

Glu Glu Asp Ser Leu Gly Gly Leu Thr Leu Ala Ala Tyr Arg Pro Glu  
180 185 190

Ala Thr Leu Gly Val Glu Val Ser Asp Ser Ser Val Asn Cys Thr Lys  
195 200 205

Lys Ser Leu Lys Ala Ile His Leu Gln Phe Lys Asn Cys Thr Ser Leu  
210 215 220

His Thr Tyr Lys Pro Arg Phe Cys Gly Val Cys Ser Asp Gly Arg Cys  
225 230 235 240

Cys Thr Pro His Asn Thr Lys Thr Ile Gln Ala Glu Phe Gln Cys Ser  
245 250 255

Ile Glu Gln Thr Thr Glu Trp Thr Ala Cys Ser Lys Ser Cys Gly Met  
260 265 270

Gly Phe Ser Thr Arg Val Thr Asn Arg Asn Arg Gln Cys Glu Met Leu  
275 280 285

Lys Gln Thr Arg Leu Cys Met Val Arg Pro Cys Glu Gln Glu Pro Glu  
290 295 300

Gln Pro Thr Asp Lys Lys Gly Lys Lys Cys Leu Arg Pro Gly Gln Ile  
305 310 315 320

Val Lys Lys Pro Val Met Val Ile Gly Thr Cys Thr Cys His Thr Asn  
325 330 335

Cys Pro Lys Asn Asn Glu Ala Phe Leu Gln Glu Leu Glu Leu Lys Thr  
340 345 350

Thr Arg Gly Lys Met  
355

<210> 18  
<211> 184  
<212> PRT  
<213> Homo sapiens  
  
<400> 18

Met Lys Ser Val Leu Leu Thr Thr Leu Leu Val Pro Ala His Leu  
1 5 10 15

Val Ala Ala Trp Ser Asn Asn Tyr Ala Val Asp Cys Pro Gln His Cys  
20 25 30

Asp Ser Ser Gly Glu Asp Pro Phe Gly Glu Glu Phe Gly Ile Cys Lys  
35 40 45

Asp Cys Pro Tyr Gly Thr Phe Gly Met Asp Cys Arg Glu Thr Cys Asn  
50 55 60

Cys Gln Ser Gly Ile Cys Asp Arg Gly Thr Gly Lys Glu Cys Lys Ser  
65 70 75 80

Ser Pro Arg Cys Lys Arg Thr Val Leu Asp Asp Cys Gly Cys Cys Arg  
85 90 95

Val Cys Ala Ala Gly Arg Gly Glu Thr Cys Tyr Arg Thr Val Ser Gly  
100 105 110

Met Asp Gly Met Lys Cys Gly Pro Gly Leu Arg Cys Gln Pro Ser Asn  
115 120 125

Cys Leu Lys Phe Pro Phe Phe Gln Tyr Ser Val Thr Lys Ser Ser Asn  
130 135 140

Arg Phe Val Ser Leu Thr Glu His Asp Met Ala Ser Gly Asp Gly Asn  
145 150 155 160

Ile Val Arg Glu Glu Val Val Lys Glu Asn Ala Ala Gly Ser Pro Val  
165 170 175

Met Arg Lys Trp Leu Asn Pro Arg  
180



<210> 19  
 <211> 291  
 <212> PRT  
 <213> Homo sapiens

<400> 19

Met Gln Arg Ala Arg Pro Thr Leu Trp Ala Ala Ala Leu Thr Leu Leu  
 1 5 10 15

Val Leu Leu Arg Gly Pro Pro Val Ala Arg Ala Gly Ala Ser Ser Gly  
 20 25 30

Gly Leu Gly Pro Val Val Arg Cys Glu Pro Cys Asp Ala Arg Ala Leu  
 35 40 45

Ala Gln Cys Ala Pro Pro Pro Ala Val Cys Ala Glu Leu Val Arg Glu  
 50 55 60

Pro Gly Cys Gly Cys Cys Leu Thr Cys Ala Leu Ser Glu Gly Gln Pro  
 65 70 75 80

Cys Gly Ile Tyr Thr Glu Arg Cys Gly Ser Gly Leu Arg Cys Gln Pro  
 85 90 95

Ser Pro Asp Glu Ala Arg Pro Leu Gln Ala Leu Leu Asp Gly Arg Gly  
 100 105 110

Leu Cys Val Asn Ala Ser Ala Val Ser Arg Leu Arg Ala Tyr Leu Leu  
 115 120 125

Pro Ala Pro Pro Ala Pro Gly Asn Ala Ser Glu Ser Glu Glu Asp Arg  
 130 135 140

Ser Ala Gly Ser Val Glu Ser Pro Ser Val Ser Ser Thr His Arg Val  
 145 150 155 160

Ser Asp Pro Lys Phe His Pro Leu His Ser Lys Ile Ile Ile Ile Lys  
 165 170 175

Lys Gly His Ala Lys Asp Ser Gln Arg Tyr Lys Val Asp Tyr Glu Ser  
 180 185 190

Gln Ser Thr Asp Thr Gln Asn Phe Ser Ser Glu Ser Lys Arg Glu Thr  
 195 200 205

Glu Tyr Gly Pro Cys Arg Arg Glu Met Glu Asp Thr Leu Asn His Leu  
210 215 220

Lys Phe Leu Asn Val Leu Ser Pro Arg Gly Val His Ile Pro Asn Cys  
225 230 235 240

Asp Lys Lys Gly Phe Tyr Lys Lys Lys Gln Cys Arg Pro Ser Lys Gly  
245 250 255

Arg Lys Arg Gly Phe Cys Trp Cys Val Asp Lys Tyr Gly Gln Pro Leu  
260 265 270

Pro Gly Tyr Thr Thr Lys Gly Lys Glu Asp Val His Cys Tyr Ser Met  
275 280 285

Gln Ser Lys  
290